CENTRAL MACHINERY®

5.5HP 21” TWO-STAGE SNOW BLOWER

Model 67456

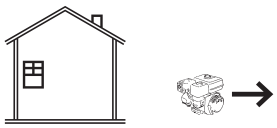
SET UP, OPERATING, AND SERVICING INSTRUCTIONS

⚠ DANGER

Using an engine indoors CAN KILL YOU IN MINUTES.

Engine exhaust contains carbon monoxide. This is a poison you cannot see or smell.

NEVER use inside a home or garage, EVEN IF doors and windows are open.



Only use OUTSIDE and far away from windows, doors, and vents.

Distributed exclusively by Harbor Freight Tools®.

3491 Mission Oaks Blvd., Camarillo, CA 93011

Visit our website at: http://www.harborfreight.com

Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

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For technical questions or replacement parts, please call 1-800-444-3353.

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SAVE THIS MANUAL

Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

IMPORTANT SAFETY INFORMATION

In this manual, on the labeling, and all other information provided with this product:

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠DANGER **DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.**

⚠WARNING **WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.**

⚠CAUTION **CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.**

NOTICE **NOTICE is used to address practices not related to personal injury.**

CAUTION **CAUTION, without the safety alert symbol, is used to address practices not related to personal injury.**

WARNING! Read all instructions. Failure to follow all instructions listed below may result in fire, serious injury and/or DEATH. The warnings and precautions discussed in this manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

SAVE THESE INSTRUCTIONS

SET UP PRECAUTIONS

1. Gasoline fuel and fumes are flammable, and potentially explosive. Use proper fuel storage and handling procedures. Do not store fuel or other flammable materials nearby.
2. Have multiple ABC class fire extinguishers nearby.
3. Operation of this equipment may create sparks that can start fires around dry vegetation.
   A spark arrestor may be required.
   The operator should contact local fire agencies for laws or

regulations relating to fire prevention requirements.

4. Set up and use only on a flat, level, well-ventilated surface.

5. Wear ANSI-approved safety goggles, heavy-duty work gloves, and dust mask/respirator during set up.

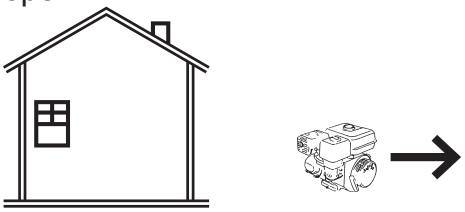
6. Use only oil and fuel recommended in the “Specifications” section of this manual.

OPERATING PRECAUTIONS

1.

CARBON MONOXIDE HAZARD
Using an engine indoors CAN KILL YOU IN MINUTES.
Engine exhaust contains carbon monoxide. This is a poison you cannot see or smell.

NEVER use inside a home or garage, EVEN IF doors and windows are open.



Only use OUTSIDE and far away from windows, doors, and vents.

2. **Keep clear of augers while engine is running.**

3. To prevent serious injury and entanglement, guard must cover pulleys before operation. Do not operate without all guards in place.

4. Disengage Drive Control Lever and Auger Control Lever before starting engine.

5. Do not tie down any Control Lever.

6. Do not use near other people, near steep slopes, or where rocks, branches, or other debris may be present.

7. Keep children away. Do not allow children to operate Blower.

8. Point discharge in safe direction. Rocks, ice and other objects will be forcefully thrown from discharge.

9. Stop engine and disconnect spark plug after use and before service or unclogging.

10. To prevent serious injury and entanglement, shut off engine and disconnect spark plug before unclogging. Use only plastic tool for unclogging.

11. Wear ANSI-approved safety goggles during operation, unclogging, and service.

12. Read manual before setup and/or use.

13. Release Drive Control Lever before changing gears.

14. Do not leave the equipment unattended when it is running. Turn off the engine (and remove safety keys, if available) before leaving the work area.

15. Fire Hazard! Do not fill gas tank while engine is running. Do not operate

if gasoline has been spilled. Clean spilled gasoline before starting engine. Do not operate near a pilot light, open flame, or flammable material, liquids or gases.

16. Do not touch engine during use. Let engine cool down after use.

17. Never store fuel or other flammable materials near the engine.

18. Only use a suitable means of transport and lifting devices with sufficient weight bearing capacity when transporting the Snow Blower.

19. Secure the Snow Blower on transport vehicles to prevent the tool from rolling, slipping, and tilting.

20. Do not allow anyone in front of Snow Blower, or direct the discharge at windows or bystanders.

21. Before use, carefully inspect the area where the Snow Blower is to be used, and remove all foreign objects.

22. People with pacemakers should consult their physician(s) before use. Electromagnetic fields in close proximity to a heart pacemaker could cause pacemaker interference or pacemaker failure. Caution is necessary when near the engine's magneto or recoil starter.

23. Use only accessories that are recommended by Harbor Freight Tools for your model. Accessories that may be suitable for one piece of equipment may become hazardous when used on another piece of equipment.

24. Do not operate in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust. Gasoline-powered engines may ignite the dust or fumes.

25. Stay alert, watch what you are doing and use common sense when operating this piece of equipment. Do not use this piece of equipment while tired or under the influence of drugs, alcohol or medication.

26. Do not overreach. Keep proper footing and balance at all times. This enables better control of the equipment in unexpected situations.

27. Use this equipment with both hands only. Using equipment with only one hand can easily result in loss of control.

28. Dress properly. Do not wear loose clothing or jewelry. Keep hair, clothing and gloves away from moving parts. Loose clothes, jewelry or long hair can be caught in moving parts.

29. Parts, especially exhaust system components, get very hot during use. Stay clear of hot parts.

30. Do not cover the engine or equipment during operation.

31. Keep the equipment, engine, and surrounding area clean at all times.

32. Use the equipment, accessories, etc., in accordance with these instructions and in the manner intended for the particular type of equipment, taking into account the working conditions and the work to be performed. Use of the equipment for operations different from those intended could result in a hazardous situation.

33. Do not operate the equipment with known leaks in the engine's fuel system.

34. This product contains or, when used, produces a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. (California Health & Safety Code § 25249.5, *et seq.*)

35. When spills of fuel or oil occur, they must be cleaned up immediately. Dispose of fluids and cleaning materials as per any local, state, or federal codes and regulations. Store oil rags in a bottom-ventilated, covered, metal container.

36. Keep hands and feet away from moving parts. Do not reach over or across equipment while operating.

37. Before use, check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the equipment's operation. **If damaged, have the equipment serviced before using.** Many accidents are caused by poorly maintained equipment.

38. Use the correct equipment for the application. Do not modify the equipment and do not use the equipment for a purpose for which it is not intended.

Vibration Hazard:

This tool vibrates during use. Repeated or long-term exposure to vibration may cause temporary or permanent physical injury, particularly to the hands, arms and shoulders. To reduce the risk of vibration-related injury:

1. Anyone using vibrating tools regularly or for an extended period should first be examined by a doctor and then have regular medical check-ups to ensure medical problems are not being caused or worsened from use. Pregnant women or people who have impaired blood circulation to the hand, past hand injuries, nervous system disorders, diabetes, or Raynaud's Disease should not use this tool. If you feel any symptoms related to vibration (such as tingling, numbness, and white or blue fingers), seek medical advice as soon as possible.

2. Do not smoke during use. Nicotine reduces the blood supply to the hands and fingers, increasing the risk of vibration-related injury.

3. Wear suitable gloves to reduce the vibration effects on the user.

4. Use tools with the lowest vibration when there is a choice between different processes.

5. Include vibration-free periods each day of work.

6. Grip tool as lightly as possible (while still keeping safe control of it). Let the tool do the work.

7. To reduce vibration, maintain the tool as explained in this manual. If any abnormal vibration occurs, stop use immediately.

SERVICE PRECAUTIONS

1. **Before service, maintenance, or cleaning:**
   a. **Turn the engine switch to its "OFF" position.**
   b. **Allow the engine to completely cool.**
   c. **Then, remove the spark plug wire(s) from the spark plug(s).**
2. Keep all safety guards in place and in proper working order. Safety guards include muffler, air cleaner, mechanical guards, and heat shields, among other guards.
3. **Do not alter or adjust any part of the equipment or its engine that is sealed by the manufacturer or distributor. Only a qualified service technician may adjust parts that may increase or decrease governed engine speed.**
4. Wear ANSI-approved safety goggles, heavy-duty work gloves, and dust mask/respirator during service.
5. Maintain labels and nameplates on the equipment. These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
6. Have the equipment serviced by a qualified repair person using only identical replacement parts. This will ensure that the safety of the equipment is maintained. Do not attempt any service or maintenance procedures not explained in this manual or any procedures that you are uncertain about your ability to perform safely or correctly.
7. Store equipment out of the reach of children.
8. Follow scheduled engine and equipment maintenance.
9. Refueling Precautions:
   a. Do not smoke, or allow sparks, flames, or other sources of ignition around the equipment, especially when refuelling.
   b. Do not refill the fuel tank while the engine is running or hot.
   c. Do not fill fuel tank to the top. Leave a little room for the fuel to expand as needed.
   d. Refuel in a well-ventilated area only.
   e. After refueling, allow fumes to evaporate prior to starting the engine.

SAVE THESE INSTRUCTIONS.

BASIC SPECIFICATIONS

Engine Rating		5.5 Horsepower, Recoil Start, EPA certified
Fuel	Type	89+ octane unleaded gasoline
	Capacity	1 Gallon
Engine Oil	Type	SAE 10W-30 (above 32° F) SAE 5W-30 (at 32° F or below)
	Capacity	0.63 Quarts
Sound Level		87 dB
Tire		13” x 4.10 - 6 NHS, 4 PR 24 PSI
Drive Gears		Five Forward: 0.9, 1.2, 1.5, 1.8, 2.5 mph Two Reverse: 0.9, 1.2 mph
Snow Throwing Distance		Up to 50 Ft.
Accessories		Spark Plug Wrench, (3) Double Sided Wrenches, Accessory Pouch, Plastic Snow Removal Tool

Note: Additional specifications found in the TECHNICAL ENGINE SPECIFICATIONS chart in this manual.

The emission control system for this Generator’s Engine is warranted for standards set by the U.S. Environmental Protection Agency. For warranty information, refer to the last pages of this manual.

At high altitudes, the engine’s carburetor, governor (if so equipped), and any other parts that control the fuel-air ratio will need to be adjusted by a qualified mechanic to allow efficient high-altitude use and to prevent damage to the engine and any other devices used with this product.

UNPACKING

When unpacking, make sure that the item is intact and undamaged. If any parts are missing or broken, please call Harbor Freight Tools at 1-800-444-3353 as soon as possible.

SET UP INSTRUCTIONS

Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

⚠WARNING **TO PREVENT SERIOUS INJURY FROM ACCIDENTAL STARTING:**
Turn the Power Switch of the equipment to its "OFF" position, wait for the engine to cool, and disconnect the spark plug wire(s) before assembling or making any adjustments to the equipment.

⚠WARNING **TO PREVENT SERIOUS INJURY:**
Operate only with proper spark arrestor installed.

Operation of this equipment may create sparks that can start fires around dry vegetation.
A spark arrestor may be required.
The operator should contact local fire agencies for laws or regulations relating to fire prevention requirements.

Note: For additional information regarding the parts listed in the following pages, refer to the Assembly Diagram near the end of this manual.

Components and Controls

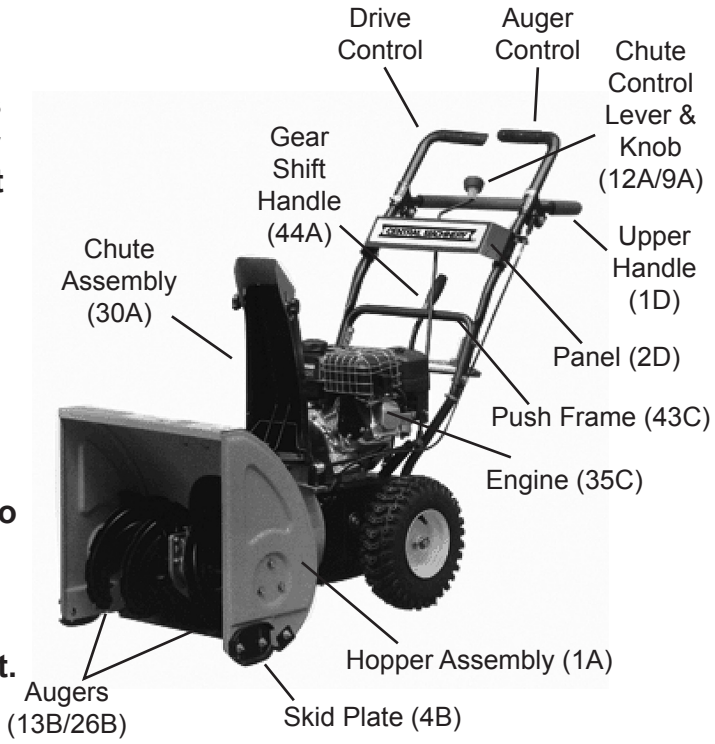


Figure 1

ASSEMBLY

1. Identify all the parts before assembly.

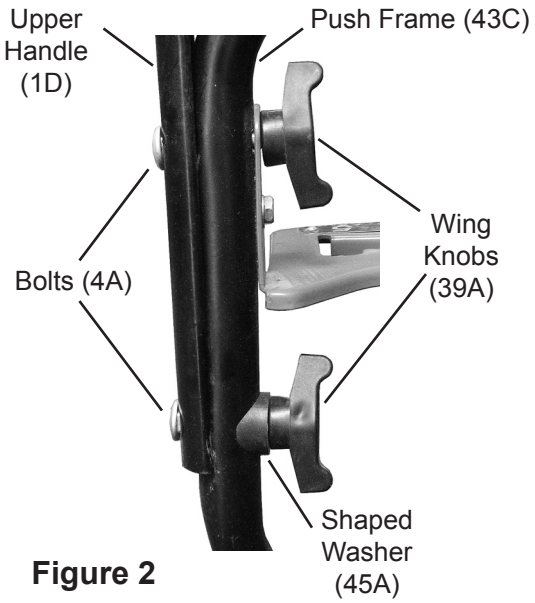


Figure 2

2. To attach the Upper Handle (1D) to the Push Frame (43C):
   a. Hold the Upper Handle (1D) on the outside of the Push Frame (43C) aligning the two holes on each side.
   b. Slide the Bolts (4A) through the holes from the outside of the Upper Handle.
   c. Thread the Wing Knobs (39A) on the upper Bolts.
   d. Slide the Shaped Washers (45A) and thread the Wing Knobs on the lower Bolts.

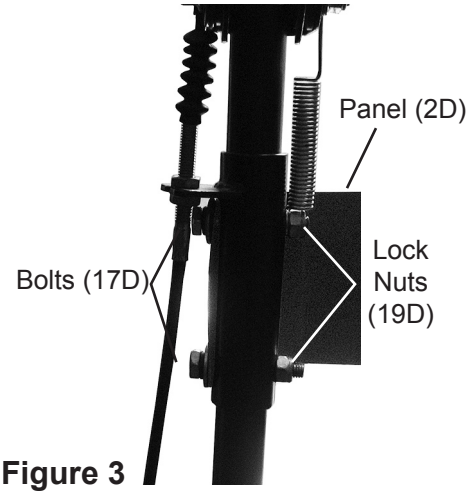


Figure 3

3. To attach the Panel (2D) to the Upper Handle:
   a. Remove the Bolts (17D), and Lock Nuts (19D) from the Upper Handle sides.
   b. Align the Panel over the holes in the side of the Upper Handle.
   c. Replace the Bolts and Lock Nuts, being careful to replace the spring on the upper Bolts.

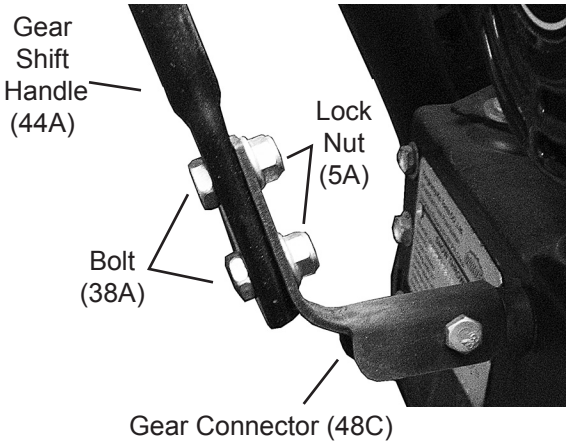


Figure 4

4. To attach the Gear Shift Handle (44A) to the Gear Connector (48C):
   a. Align the Gear Shift Handle and Gear Connector holes.
   b. Attach with Bolts (38A) and Lock Nuts (5A).

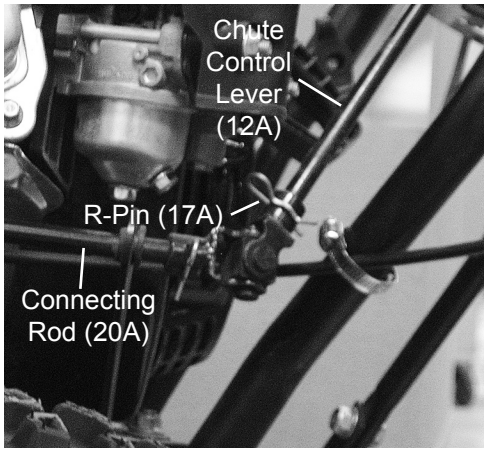


Figure 5

5. To attach the Chute Control Lever (12A) to the Connecting Rod (20A):
   a. Insert the Chute Control Lever into the slot at the end of the Connecting Rod.
   b. Align the holes in both parts and insert the R-Pin (17A).

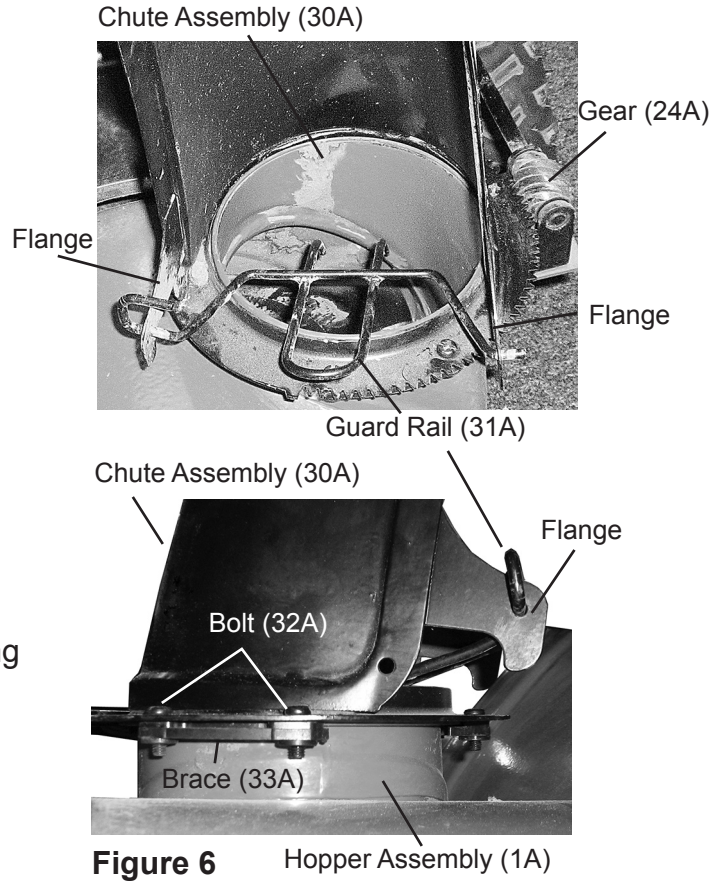


Figure 6

6. To attach the Chute Assembly (30A) to the Hopper Assembly (1A):
   a. Thread the looped end of the Guard Rail (31A) through the hole in the left flange of the Chute Assembly (30A). Insert the other end through the other flange hole as shown in the upper photo.
   b. Align the holes in the rim of the Chute Assembly with the holes in the rim of the Hopper Assembly (1A) opening. Make sure the toothed section of the rim lines up with the Gear (24A) so that when the Chute Assembly is rotated it can face all the way from the left to the right side of the Snow Blower.
   c. Attach the Chute to the Hopper Assembly, using three Braces (33A) with Screws (32A) (See Figure 6).

7. To attach the Wheels (57C):

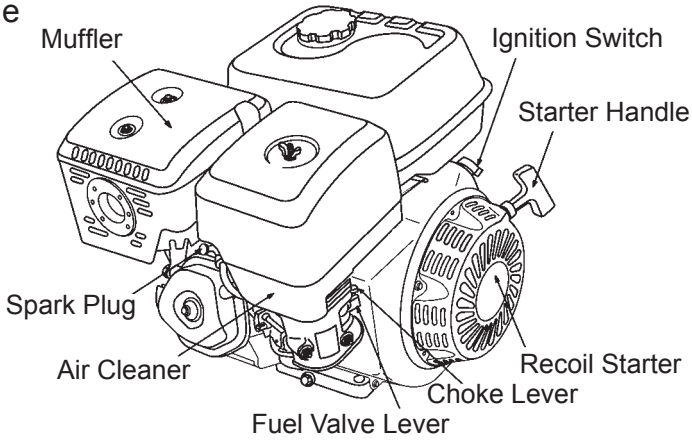
   a. With help, lift the unit and slide each Wheel (57C) as far as it will go onto the Drive Shaft (54C).

   b. There are two holes in each end of the Drive Shaft. The inner hole engages the drive shaft. The outer hole is for pushing or transporting the Snow Blower. Slide a Pin (22C) through the inner hole on each Drive Shaft and rotate the ring of the Pin over the drive shaft to lock it in place.

OPERATING INSTRUCTIONS

Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

Engine Controls



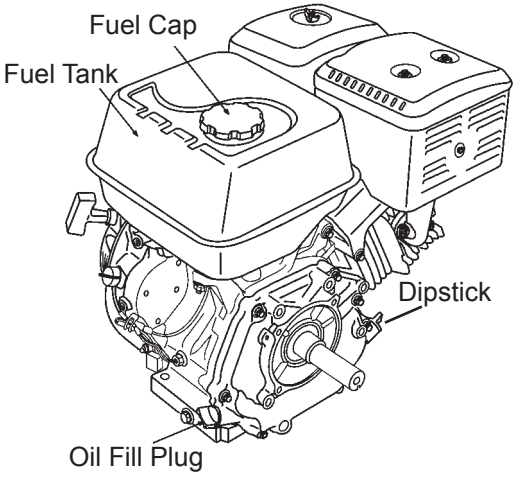


Figure 7

Pre-Start Checklist

Inspect engine and equipment looking for damaged, loose, and missing parts before set up and starting. If any problems are found, do not use equipment until fixed properly.

Checking and Filling Engine Oil

CAUTION! Your Warranty is VOID if the engine's crankcase is not properly filled with oil before each use. Before each use, check the oil level. Do not run the engine with low or no engine oil. Running the engine with no or low engine oil WILL permanently damage the engine.

1. Clean the Dipstick exterior and the area around it. Remove the Dipstick by threading it counterclockwise, and wipe it off with a clean, lint free rag.
2. Reinsert the Dipstick without threading it in and remove it to check the oil level. The oil level should be between the high and low marks on the Dipstick.
3. If the oil level is at or below the low mark: Wipe the Oil Fill Plug (opposite the dipstick), remove it, and add the appropriate type of oil through it's hole until the oil level is between the high and the low marks. Do not overfill.

   Oil type:

   above 32° F = SAE 10W-30

   32° F or below = SAE 5W-30
4. Replace the Oil Dipstick by threading it clockwise.

CAUTION! Do not run the engine with too little or too much oil. The engine will be permanently damaged.

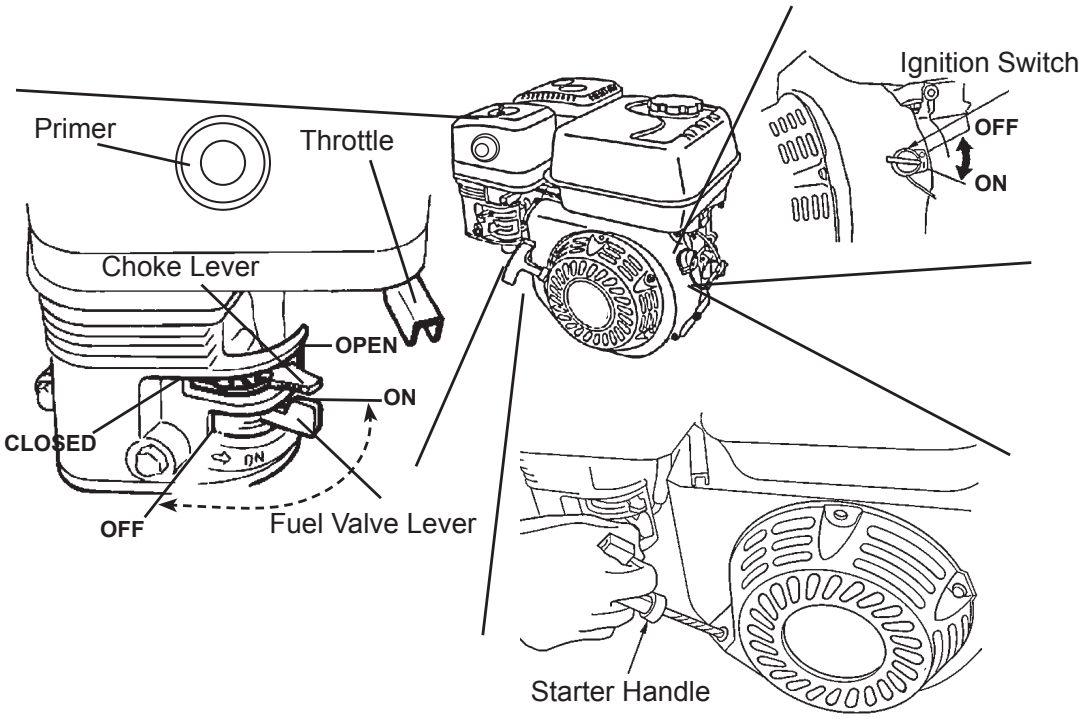


Figure 8

Checking and Filling Fuel

⚠WARNING! TO PREVENT SERIOUS INJURY FROM FIRE:

Fill the fuel tank in a well-ventilated area away from ignition sources. If the engine is hot from use, shut the engine off and wait for it to cool before adding fuel. Do not smoke.

1. Clean the Fuel Cap and the area around it.
2. Unscrew and remove the Fuel Cap.
3. If needed, fill the Fuel Tank to about 1 inch under the fill neck of the gasoline tank with 89 octane or better unleaded gasoline.
4. Then replace the Fuel Cap, turning it counterclockwise to tighten.
5. Wipe off any spilled fuel and allow excess to evaporate before starting engine. To prevent FIRE, do not start the engine while the smell of fuel hangs in the air.

Starting the Engine

Start Procedure

Before starting the engine:

a. **Follow the Set Up Instructions to prepare the equipment.**
b. **Inspect the equipment and the engine.**
c. **Fill the engine with proper amount and type of fuel and oil.**
d. **Read the Equipment Operation section.**

IMPORTANT: Make sure that both the Auger Control and Drive Control are disengaged. Know how to start and stop the engine and how to operate all controls before starting the engine.

1. Slide the Throttle to the FAST position.

Note: The Throttle is located on the engine as shown in Figure 8. Some tools have a Speed Control Lever located elsewhere on the tool which functions the same as the Throttle. Use the Speed Control Lever instead of the Throttle when the tool is so equipped.

2. Adjust the Choke as follows:
   a. For a cold engine move the Choke Lever to the CLOSED position and push the Primer button two or three times. Additional priming may be necessary if the temperature is below 15°F.
   b. For a warm engine, leave the Choke Lever in the OPEN position and do not push the Primer button.
3. If the engine is cold, give the Starter Handle a few gentle pulls to allow the gasoline to flow into the Engine's carburetor.
4. Pull the Starter Handle gently until resistance is felt. Allow Cable to retract fully and pull forcefully, rapidly, all the way out. Repeat this step until the engine starts.

Note: Be careful to pull to the side of the Snow Blower when pulling the Starter Handle to avoid scraping against the side of the Handle and Panel.

5. Once the Engine starts, hold the Starter Handle loosely, guiding it as it recoils so it doesn't hit the engine.

6. Allow the Engine to run for several seconds. Then, if the Choke lever is in the CLOSED position, move the Choke Lever very slowly to its OPEN position.

Note: Moving the Choke Lever too fast could kill the engine.

7. IMPORTANT: Allow the engine to run at no load for five minutes after each start-up to stabilize the engine.

8. Adjust the Throttle between its “LOW” to “HIGH” position as needed to maintain power to the engine.

Break-in Period

1. Breaking-in the engine will help in prolonging its life.

2. The operational break-in period will last about 3 hours of use. During this period:
   - Do not apply a heavy load to the equipment.
   - Do not operate the engine at its maximum speed.

3. The maintenance break-in period will last about 20 hours of use. After this period:
   - Change the engine oil.

   Under normal operating conditions subsequent maintenance follows the schedule explained in the MAINTENANCE AND SERVICING section.

To Stop The Engine

1. To stop the engine in an emergency, turn the Ignition Switch off.

2. Under normal conditions, use the following procedure:
   a. With the engine running, pull the Starter rope with a rapid, continuous full arm stroke three or four times. This will produce a loud clattering sound which is not harmful to the engine.
   b. Slide the Throttle to stop.
   c. Turn the Ignition Switch to off.
   d. Wipe all snow and moisture from the area around the engine as well as the area in and around the drive control.

Operating the Snow Blower

Set Up

1. Loosen the Bolts (5B) holding the Skid Plates (4B) and adjust the level of the skid plates for the terrain. On smooth sidewalks, set the Skid Plate to its highest position so the Hopper Assembly (1A) is almost touching the ground. For uneven surfaces, set the Skid Plate lower to give the Hopper Assembly more clearance.

WARNING: Do not use the Snow Blower on rocky or gravel surfaces. Such materials can be drawn up into the machine, damage the machine and/or cause injury to bystanders when ejected from the Chute.

2. Loosen the Knobs (26A) on the side of the Chute Cap (28 A), rotate the Cap to the desired position, then retighten the Knobs. This determines the distance that snow is thrown. Setting the Chute Cap down causes the snow to be thrown a short distance, while setting it up will throw snow farther.

Operation

1. Follow the Set up procedures and understand all the controls and how to start and stop the engine and Snow Blower.
2. Check the fuel and oil level of the engine.
3. Start the engine.
4. Keep the engine Throttle in the fast position and only use the Gear Shift Handle to adjust the speed.
5. Move the Gear Shift Handle to one of the five forward positions or two reverse positions. Select the speed appropriate for the snow conditions and a pace that you are comfortable with. Use a slower speed until you are comfortable and familiar with the operation of the Snow Blower.
6. Squeeze the Auger Control against the handle to power the auger. Release it to stop.
7. Squeeze the Drive Control against the handle to power forward or reverse travel of the Snow Blower. Release it to stop.

IMPORTANT: Do not reposition the Gear Shift Handle (44A) (change speeds or direction of travel) without first releasing the drive control and bringing the Snow Blower to a complete stop. Doing so will result in premature wear to the Snow Blower's drive system.

8. After completing the task, run the engine for a few minutes to melt any snow or ice from the unit.
9. Release the Auger and Drive Controls, turn off the engine and allow it to cool enough to clean. Clean the entire Snow Blower thoroughly after each use and wipe dry.

Snow Blower Practices

a. Snow is easier to remove when it is freshly fallen and/or in the early morning hours before it has been warmed by the sun.

b. When adjusting the gears, use lower speeds for heavier snow, and higher speeds for softer snow and for transporting the Snow Blower.

c. Overlap each successive path slightly to ensure complete removal of snow from the area. If the snow is extremely heavy, work over the same path twice before moving to the adjacent section.

d. Direct the Chute downwind whenever possible.

e. Keep the engine clean and clear of snow during use. This will help air flow while extending the life of the engine.

Chute Clean-out

WARNING: The muffler, engine and surrounding areas become hot. Stay clear of hot parts of the Snow Blower and engine. Turn the engine off before cleaning the Chute

To clean the Chute:

a. Release both the Auger Control and the Drive Control.

b. Stop the engine.

c. Remove the clean-out tool from the clip on the Hopper Assembly (1A).

d. Use the shovel-shaped end of the clean-out tool to dislodge and scoop

any snow and ice which has formed in and near the chute assembly.

e. Always keep your hands a safe distance from the Chute

f. Refasten the clean-out tool to the clip on the auger housing, and start the snow Blower's engine.

TECHNICAL SPECIFICATIONS

Engine Type		Horizontal Single Cylinder 4 stroke OHV Recoil Start
Bore x Stroke		68 x 45
Compression Ratio		8.5:1
Displacement		163cc
Rotation viewed from PTO (power takeoff - the output shaft)		Counterclockwise
Fuel	Type	89+ octane unleaded gasoline
	Capacity	1 Gallon
Engine Oil	Type	SAE 10W-30 (above 32° F) SAE 5W-30 (at 32° F or below)
	Capacity	0.63 Quarts
Spark Plug	Type	F7RTC
	Gap	0.028-0.031" (0.7~ 0.8mm)
Valve Clearance	Intake	0.10 ± 0.15 mm
	Exhaust	0.15 ± 0.20 mm
Speed	Idle	1,400 ± 150 RPM

SERVICING

⚠WARNING **TO PREVENT SERIOUS INJURY FROM ACCIDENTAL STARTING:**

Turn the Power Switch of the equipment to its "OFF" position, wait for the engine to cool, and disconnect the spark plug wire(s) before performing any inspection, maintenance, or cleaning procedures.

⚠WARNING **TO PREVENT SERIOUS INJURY FROM EQUIPMENT FAILURE:**

Do not use damaged equipment. If abnormal noise,

vibration, or excess smoking occurs, have the problem corrected before further use.

Maintenance Procedures

Many maintenance procedures, including those not detailed in this manual, will need to be performed by a qualified technician for safety. If you have any doubts about your ability to safely service the equipment or engine, have a qualified technician service the equipment instead.

Note: Warranty is void if proper maintenance and servicing procedures are not followed.

Engine Oil Change

CAUTION! Oil is very hot during operation and can cause burns. Wait for engine to cool before changing oil.

1. Place a drain pan (not included) underneath the crankcase's drain plug.
2. Remove the drain plug (18) and, if possible, tilt the crankcase slightly to help drain the oil out. Recycle used oil.
3. Replace the drain plug and gasket (19) and tighten it.
4. Refill the oil to the proper level following the instructions under the Starting the Engine section.

Air Filter Element Maintenance

1. Wipe off the air cleaner cover.
2. The air cleaner cover is held in place by a nut (112). Remove it.
3. Remove the air filter element.
4. **Cleaning:**
   a. The "paper" filter element:
   To prevent injury from dust and debris, wear ANSI-approved safety goggles, NIOSH-approved dust mask/respirator, and heavy-duty work gloves. In a well-ventilated area away from bystanders, use pressurized air to blow dust out of the air filter from the side opposite the filter's normal air flow (the "clean" side of the filter).
   If this does not get the filter reasonably clean, replace it.
   b. The foam filter element:
   Wash the element in warm water and mild detergent several times. Rinse. Squeeze out excess water and allow it to dry completely. Soak the filter in lightweight oil briefly, then squeeze out the excess oil.
5. Install the new filters or the cleaned filters. Secure the Air Cleaner Cover before use.

Spark Plug Maintenance

1. Disconnect spark plug wire from end of plug. Clean out debris from around spark plug.
2. Using a spark plug wrench, remove the spark plug.
3. Inspect the spark plug:
   If the electrode is oily, clean it using a clean, dry rag.
   If the electrode has deposits on it, polish it using emery paper.
   If the white insulator is cracked or

chipped, the spark plug needs to be replaced.

4. When installing a new spark plug, adjust the plug's gap to the specification on the Technical specification chart. Do not pry against the electrode or the insulator, the spark plug can be damaged.

5. Install the new spark plug or the cleaned spark plug into the engine. Gasket-style: Finger-tighten until the gasket contacts the cylinder head, then about 1/2-2/3 turn more. Non-gasket-style: Finger-tighten until the plug contacts the head, then about 1/16 turn more.

6. Apply a small amount of dielectric grease (not included) to the insulator of the spark plug and attach the wire securely to the spark plug.

Fuel Filter Replacement

⚠WARNING! TO PREVENT SERIOUS INJURY FROM FIRE:
Clean the fuel filter in a well-ventilated area away from ignition sources. Do not smoke.

1. Wait for the engine to cool completely before proceeding.

2. Wear protective gear including, ANSI-approved safety goggles, NIOSH-approved dust mask/respirator, and nitrile gloves.

3. The Fuel Filter (125) is attached to the inside of the Fuel Cap (123).

4. Remove the Cap with the filter, and clean the filter of any debris. Replace the cap with the filter attached.

5. Clean up and properly dispose of any spilled fuel.

6. Wait for at least one hour before use to allow all residual fuel vapors to dissipate. **To prevent FIRE, do not start the engine while the smell of fuel hangs in the air.** Remember to open the fuel valve before restarting the engine. It may take a little longer than usual to start the engine because the fuel needs to refill the fuel line and new filter.

Cleaning, Maintenance, and Lubrication Schedule

Note: This maintenance schedule is intended solely as a general guide. If performance decreases or if equipment operates unusually, check systems immediately. The maintenance needs of each piece of equipment will differ depending on factors such as duty cycle, temperature, air quality, fuel quality, and other factors.

Note: These procedures are in addition to the regular checks and maintenance explained as part of the regular operation of the engine and equipment.

After Initial 20 Operation Hour Period:

a. Change engine oil.

Every 25 Operation Hours Thereafter:

a. Clean/replace air filter element.

b. Inspect/clean spark plug.

Every 50 Operation Hours:

a. Change engine oil.

b. Replace fuel filter (if equipped).

Every 100 Operation Hours:

a. Replace spark plug.

b. Replace air filter element.

Note: All maintenance procedures scheduled for 25, 50, and 100 operation hours should be performed at least yearly.

Every 300 Operation Hours:

a. Clean fuel tank and carburetor.

b. Clean carbon build-up from combustion chamber.

Storage

1. Wait for engine to cool, then wipe engine with clean cloth.
2. When the equipment is to remain idle for longer than 20 days, prepare the engine for storage as follows:
   a. Change engine oil and empty fuel tank.
   b. Either leave fuel tank empty or refill fuel tank with fresh unleaded gasoline mixed with a fuel stabilizer intended for long term engine storage (not included). After filling, run engine for about 5-10 minutes to circulate the treated gasoline through the carburetor. Wait for engine to cool before proceeding.
   c. Clean out area around spark plug. Remove spark plug and pour one tablespoon of engine oil into cylinder through spark plug hole.
   d. Reinstall spark plug, but leave spark plug wire disconnected.
   e. Pull recoil starter to distribute oil in cylinder. Stop after one or two revolutions when you feel the piston start the compression stroke (when you start to feel resistance).
3. Apply a thin coat of rust preventive oil to all uncoated metal parts.
4. Cover and store in a dry, well-ventilated area out of reach of children.
5. Before starting the engine after storage, keep in mind that untreated gasoline will deteriorate quickly. Drain the fuel tank, and change to fresh fuel if untreated gasoline has been sitting for a month, if treated gasoline has been sitting beyond the fuel stabilizer's recommended time period, or if the engine does not start or run properly.

Troubleshooting

Engine will not start	FUEL RELATED:	FUEL RELATED:
	1. No fuel in tank or fuel valve closed.	1. Fill fuel tank and open fuel valve.
	2. Choke not in start position, especially with cold engine.	2. Move choke to start position if engine is cold.
	3. Low quality or deteriorated, old gasoline.	3. Use only fresh 89+ octane unleaded gasoline.
	4. Carburetor not primed.	4. Prime carburetor by pressing priming bulb specified number of times.
	5. Dirty fuel passageways blocking fuel flow.	5. Clean out passageways using fuel additive. Heavy deposits may require further cleaning.
	6. Carburetor needle stuck. Fuel can be smelled in the air.	6. **Gently** tap side of carburetor float chamber with screwdriver handle.
	7. Too much fuel in chamber. This can be caused by the carburetor needle sticking.	7. Turn choke to run position. Remove spark plug and pull the start handle several times to air out the chamber. Reinstall spark plug and set choke to start position.
	IGNITION (SPARK) RELATED:	IGNITION (SPARK) RELATED:
	1. Spark plug wire not connected securely.	1. Connect spark plug wire properly.
	2. Spark plug electrode wet or dirty.	2. Clean spark plug.
	3. Incorrect spark plug gap.	3. Correct spark plug gap.
	4. Spark plug wire or spark plug broken.	4. Replace spark plug wire and/or spark plug.
	5. Incorrect spark timing or faulty ignition system.	5. Have qualified technician diagnose/ repair ignition system.
	COMPRESSION RELATED:	COMPRESSION RELATED:
	1. Cylinder not lubricated regularly. Problem develops after long storage periods.	1. Pour tablespoon of oil into spark plug hole. Crank engine a few times and try to start again.
	2. Loose or broken spark plug. (Hissing noise will occur when trying to start.)	2. Tighten spark plug. If that does not work, replace spark plug. If problem persists, may have head gasket problem, see #3.
	3. Loose cylinder head or damaged head gasket. (Hissing noise will occur when trying to start.)	3. Tighten head. If that does not remedy problem, replace head gasket.
	4. Engine valves or tappets misadjusted or stuck.	4. Adjust valve clearance. If that does not work, clean or replace valves/ tappets.

Follow all safety precautions whenever diagnosing or servicing the equipment or engine.

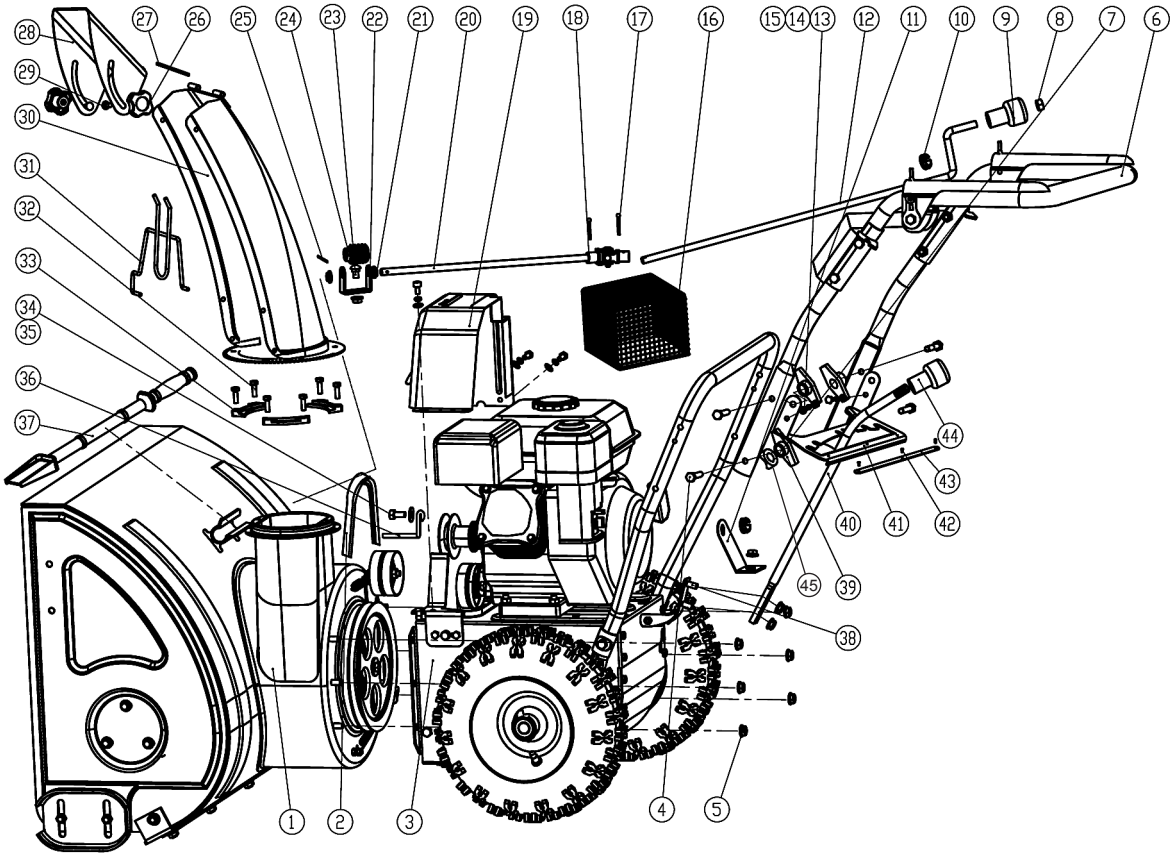
Problem	Possible Causes	Probable Solutions
Engine misfires	1. Spark plug wire loose.	1. Check wire connections.
	2. Incorrect spark plug gap or damaged spark plug.	2. Re-gap or replace spark plug.
	3. Defective spark plug wire.	3. Replace spark plug wire.
	4. Old or low quality gasoline.	4. Use only fresh 89+ octane unleaded gasoline.
	5. Incorrect compression.	5. Diagnose and repair compression. (Use **Engine will not start: COMPRESSION RELATED** section.)
Engine stops suddenly	1. Low oil shutdown.	1. Fill engine oil to proper level. Check engine oil before EVERY use.
	2. Fuel tank empty or full of impure or low quality gasoline.	2. Fill fuel tank with fresh 89+ octane unleaded gasoline.
	3. Defective fuel tank cap creating vacuum, preventing proper fuel flow.	3. Test/replace fuel tank gasket/cap.
	4. Improper idle speed.	4. Properly adjust idle speed.
	5. Faulty magneto, incorrect timing, or clogged carburetor.	5. Have qualified technician diagnose and service engine.
Engine knocks	1. Old or low quality gasoline.	1. Fill fuel tank with fresh 89+ octane unleaded gasoline.
	2. Engine overloaded.	2. Do not exceed equipment's load rating.
	3. Incorrect spark timing, deposit buildup, worn engine, or other mechanical problems.	3. Have qualified technician diagnose and service engine.
Engine backfires	1. Impure or low quality gasoline.	1. Fill fuel tank with fresh 89+ octane unleaded gasoline.
	2. Engine too cold.	2. Use cold weather fuel and oil additives to prevent backfiring.
	3. Choke not open after engine warm.	3. Move choke to run position after engine warms up.
	4. Engine not properly adjusted for high altitude operation.	4. Qualified technician must adjust engine at altitudes greater than 5,000 feet above sea level.
	5. Intake valve stuck, choke stuck, incorrect timing, clogged carburetor, or overheated engine.	5. Have qualified technician diagnose and service engine.

Follow all safety precautions whenever diagnosing or servicing the equipment or engine.

MAIN (A) PARTS LIST & ASSEMBLY DIAGRAM

Part	Description	Qty
1A	Hopper Assembly	1
2A	Belt	1
3A	Moving Assembly	1
4A	Carriage Bolt M8x50	4
5A	Lock Nut M8	10
6A	Handle Assembly	1
7A	Plastic Nut Housing	2
8A	Lock Nut M10	1
9A	Knob	1
10A	Bracket Washer	2
11A	Rocker Bracket	1
12A	Chute Control Lever	1
13A	Hexagon Head Bolt M6x10	5
14A	Spring Washer 6	5
15A	Flat Washer 6	5
16A	Wire Cage	1
17A	R-Pin	1
18A	Gimbal Assembly	1
19A	Belt Cover	1
20A	Connecting Rod	1
21A	Washer, For Bracket	2
22A	Bracket	1
23A	Carriage Bolt M8x20	1

Part	Description	Qty
24A	Gear	1
25A	Spring Pin	1
26A	Knob	2
27A	Bolt	1
28A	Chute Cap	1
29A	Carriage Bolt M6x20	2
30A	Chute Assembly	1
31A	Guard Rail	1
32A	Bolt M6x16	6
33A	Brace	3
34A	Hexagon Screws M8x20	1
35A	Flat Washer 8	1
36A	Belt Baffle	1
37A	Snow Removal Tool	1
38A	Bolt M8x20	2
39A	Wing Knob	4
40A	Shift Lever	1
41A	Speed Selector Panel	1
42A	Rout Head Rivets 3x5	3
43A	Gear Scutcheon	1
44A	Gear Shift Handle	1
45A	Shaped Washer	2

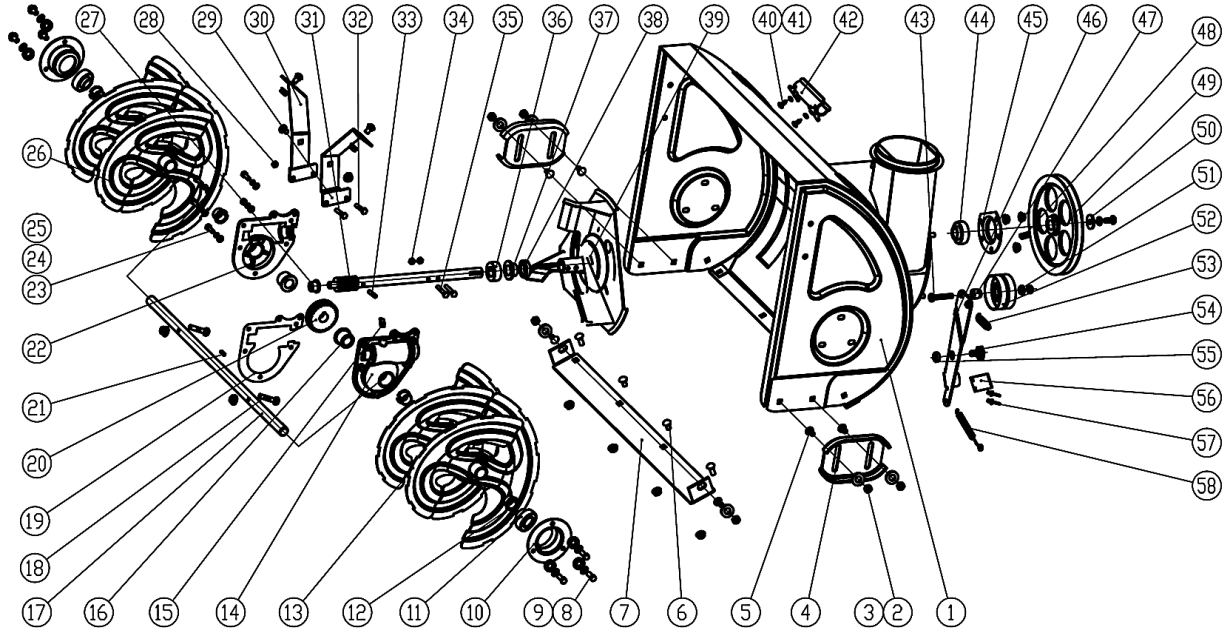


When ordering replacement parts from this list, the “A” suffix must be included in order to get the correct part.

AUGER (B) PARTS LIST & ASSEMBLY DIAGRAM

Part	Description	Qty
1B	Housing Assembly	1
2B	Lock Nut M8	19
3B	Big Washer 8	12
4B	Skid Plate	2
5B	Carriage Bolt M8x20	8
6B	Carriage Bolt M8x15	5
7B	Shave Plate	1
8B	Hexagon Head Bolt M8x15	7
9B	Spring Washer 8	7
10B	Bearing Cover	2
11B	Bearing	2
12B	Bushing Drive Shaft	4
13B	Right Auger	1
14B	Right Worm Housing	1
15B	Forced Filling Oil Cup	1
16B	Output Shaft Sleeve (Ø19)	1
17B	Output Shaft (550)	1
18B	Hexagon Screw	2
19B	Paper Washer	1
20B	Worm Gear	1
21B	Parallel Key B5x5x15	1
22B	Left Worm Housing	1
23B	Hexagon Head Bolt M6x20	5
24B	Spring Washer 6	5
25B	Flat Washer 6	5
26B	Left Auger	1
27B	Worm 2 Bushing	1
28B	Lock Nut M6	2
29B	Chair Right	1

Part	Description	Qty
30B	Chair Left	1
31B	Worm Shaft	1
32B	Hexagon Bolt M6x30	2
33B	Spring Bolt 6x30	1
34B	Lock Nut M6	3
35B	Hexagon Head Bolt M6x35	2
36B	Collar, for Worm	1
37B	Worm Busing 1	1
38B	Sealing Ring B 20 35	3
39B	Fan	1
40B	Phillips Head Screw ST4.2x13	2
41B	Flat Washer 6	2
42B	Bracket, for Snow Removal Tool	1
43B	Hexagon Head Bolt M8x40	1
44B	Ball Bearing	1
45B	Bearing Housing	1
46B	Fixed Plate	1
47B	Washer	1
48B	Parallel Key B6x6x22	1
49B	Belt Pulley	1
50B	Jumbo Flat Washer 8	1
51B	Gasket	3
52B	Big Tension Pulley	1
53B	Auger Pull Wire	1
54B	Hexagon Screw	1
55B	Lock Nut M10	1
56B	Brake Plate	1
57B	Open Type Blind Rivets 4x10	2
58B	Spring 5	1



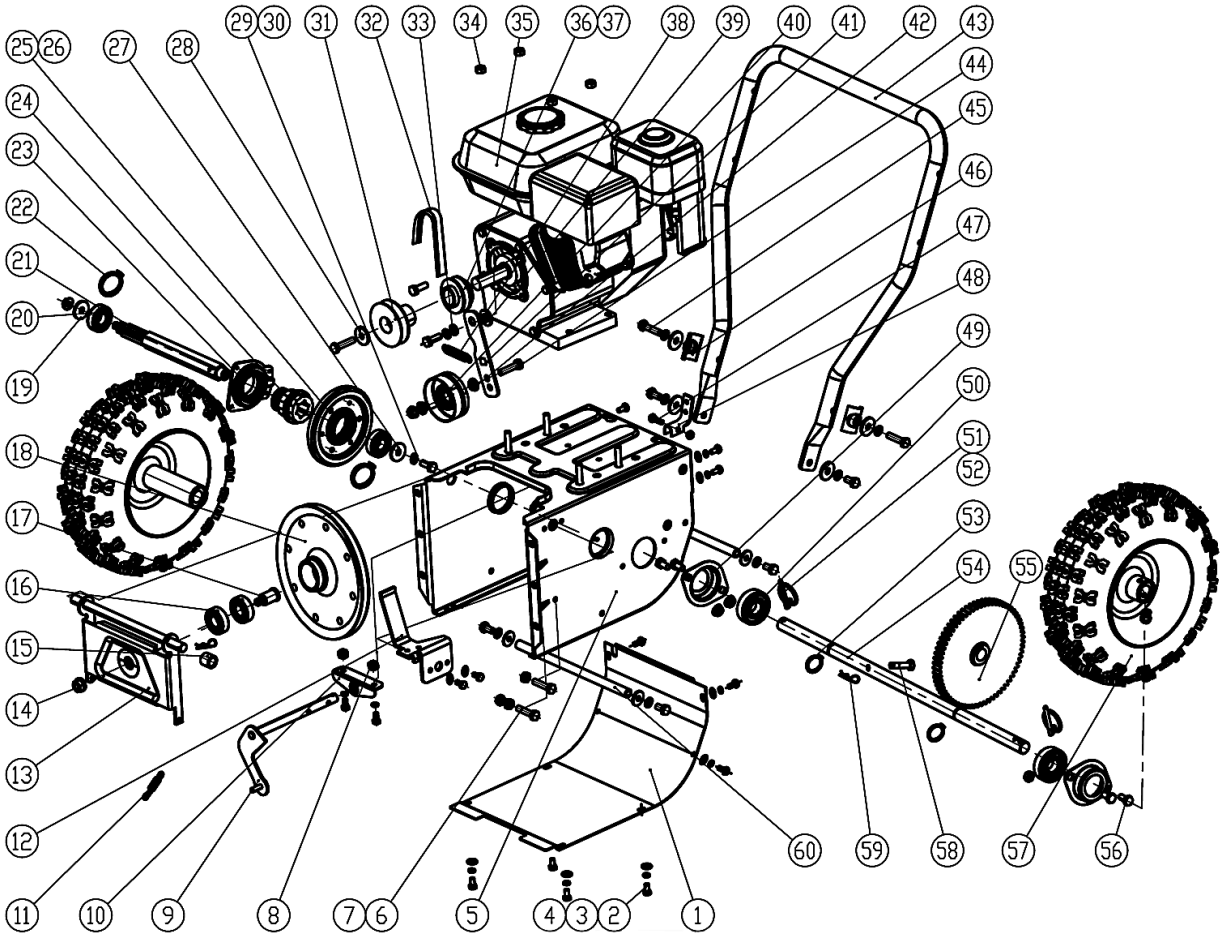
When ordering replacement parts from this list, the “B” suffix must be included in order to get the correct part.

BODY (C) PARTS LIST DIAGRAM

Part	Description	Qty
1C	Frame Cover	1
2C	Hexagon Head Bolt M6x10	17
3C	Spring Washer 6	17
4C	Flat Washer 6	11
5C	Wheel Box	1
6C	Hexagon Head Bolt M6x35	2
7C	Lock Nut M6	3
8C	Hexagon Nut (thin) M6	4
9C	Shifting Fork	1
10C	Right Angle Metal Block	1
11C	Spring 6	1
12C	Bevel Baffle	1
13C	Bevel Wheel Bracket	1
14C	Lock Nut M10	2
15C	Spacer	1
16C	Bearing	2
17C	Drive Belt Axle	1
18C	Big Belt Wheel	1
19C	Big Washer	1
20C	Ball Bearing	2
21C	Hexagon Transmission Shaft	1
22C	Pin, for shaft 40	1
23C	Gear Wheel Cover	2
24C	Gear Wheel	1
25C	Rubber Ring for Gear Wheel	1
26C	Big Washer, for Gear Wheel	2
27C	Big Washer 8	5
28C	Jumbo Washer 8	1
29C	Hexagon Bolt M8x20	5
30C	Spring Washer 8	10
31C	Belt Pulley 2	1

Part	Description	Qty
32C	Belt	1
33C	Flat Washer 8	5
34C	Lock Nut M8	9
35C	Engine	1
36C	Belt Wheel Turntable 1	1
37C	Belt Wheel Turntable 2	1
38C	Spring 3	1
39C	Pad, for Small Tension Pulley	1
40C	Small Tension Pulley	1
41C	Small Tension Plate	1
42C	Pad	2
43C	Push Frame	1
44C	Hexagon Head Bolt M8x35	1
45C	Hexagon Head Bolt M8x45	2
46C	Gasket	2
47C	Hexagon Head Bolt	1
48C	Gear Connector	1
49C	Bearing housing	2
50C	Ball Bearing	2
51C	Spring Bolt	2
52C	Spring Ring	2
53C	Circlip, for Shaft 19	2
54C	Drive Shaft	1
55C	Differential	1
56C	Hexagon Head Bolt M8x15	4
57C	Wheel	2
58C	Pinned Shaft with hole	1
59C	R-Pin	2
60C	Strut Bar	2

BODY (C) ASSEMBLY DIAGRAM



When ordering replacement parts from this list, the “C” suffix must be included in order to get the correct part.

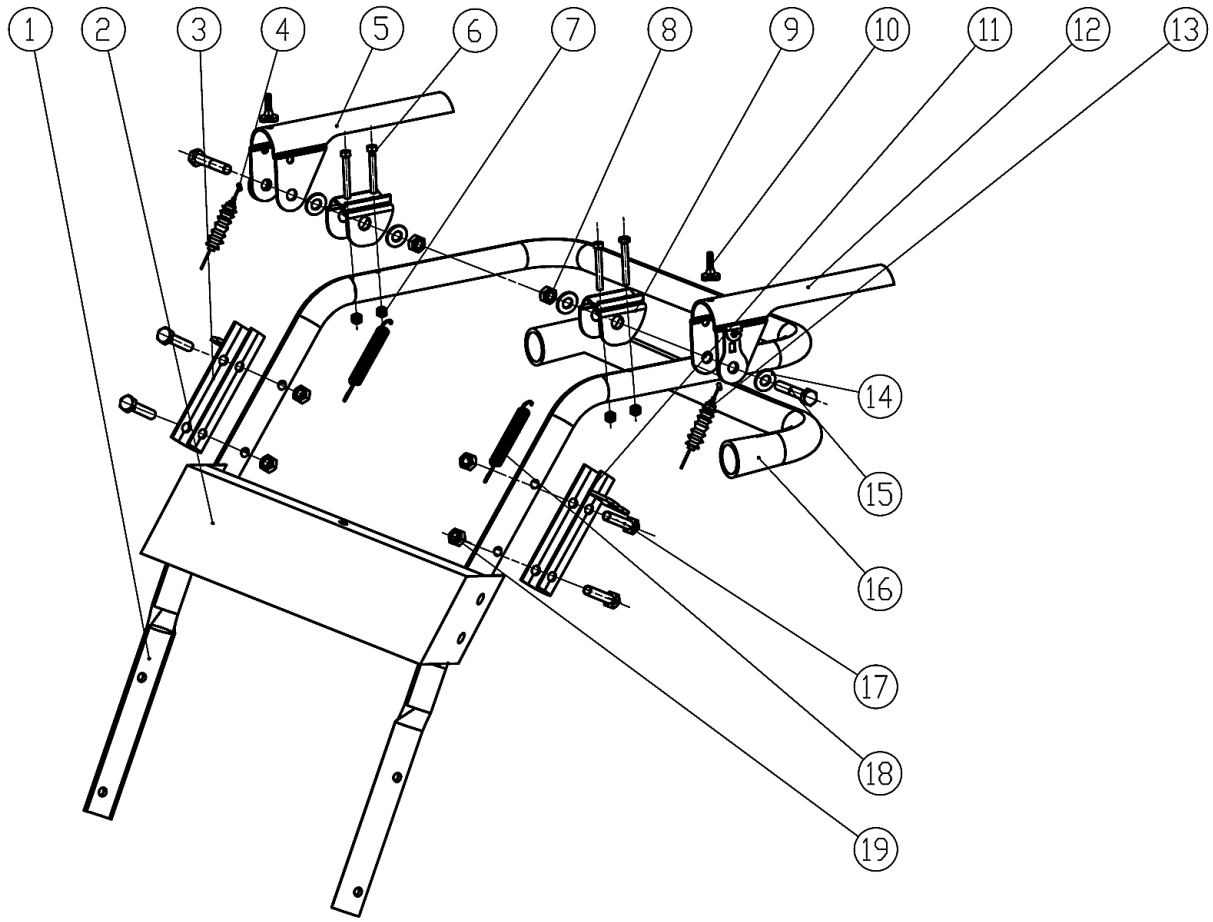
PLEASE READ THE FOLLOWING CAREFULLY

THE MANUFACTURER AND/OR DISTRIBUTOR HAS PROVIDED THE PARTS LIST AND ASSEMBLY DIAGRAM IN THIS MANUAL AS A REFERENCE TOOL ONLY. NEITHER THE MANUFACTURER OR DISTRIBUTOR MAKES ANY REPRESENTATION OR WARRANTY OF ANY KIND TO THE BUYER THAT HE OR SHE IS QUALIFIED TO MAKE ANY REPAIRS TO THE PRODUCT, OR THAT HE OR SHE IS QUALIFIED TO REPLACE ANY PARTS OF THE PRODUCT. IN FACT, THE MANUFACTURER AND/OR DISTRIBUTOR EXPRESSLY STATES THAT ALL REPAIRS AND PARTS REPLACEMENTS SHOULD BE UNDERTAKEN BY CERTIFIED AND LICENSED TECHNICIANS, AND NOT BY THE BUYER. THE BUYER ASSUMES ALL RISK AND LIABILITY ARISING OUT OF HIS OR HER REPAIRS TO THE ORIGINAL PRODUCT OR REPLACEMENT PARTS THERETO, OR ARISING OUT OF HIS OR HER INSTALLATION OF REPLACEMENT PARTS THERETO.

HANDLE (D) PARTS LIST & ASSEMBLY DIAGRAM

Part	Description	Qty
1D	Upper Handle	1
2D	Panel	1
3D	Plate	1
4D	Moving Pull Wire	1
5D	Right Handle	1
6D	Bolt M5x35	4
7D	Lock Nut M5	4
8D	Lock Nut M10	2
9D	Fixed Plate, for Back Handle	2
10D	Rubber Pad	2

Part	Description	Qty
11D	Plate	1
12D	Handle, Left	1
13D	Auger Pull Wire	1
14D	Flat Washer 10	4
15D	Hexagon Head Bolt M10x60	2
16D	Slipcover	1
17D	Bolt M8x45	4
18D	Spring, for Handle	2
19D	Lock Nut M8	4



When ordering replacement parts from this list, the “D” suffix must be included in order to get the correct part.

Record Product’s Serial Number Here:_____

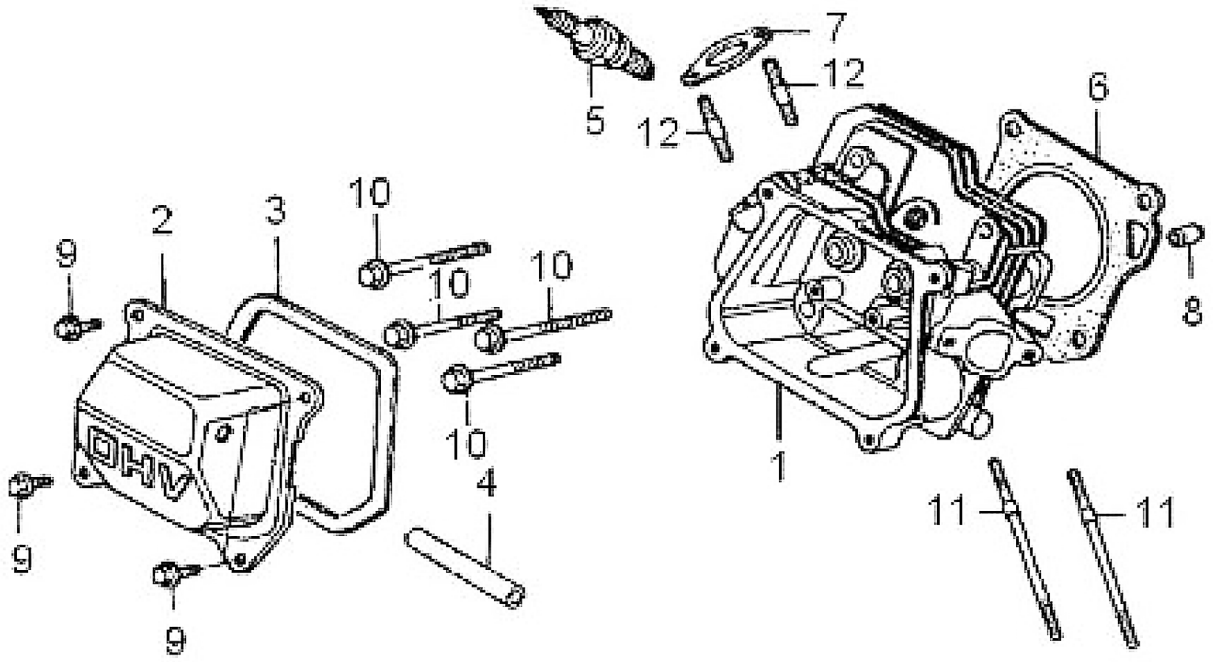
Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

CYLINDER HEAD PARTS LIST & ASSEMBLY DIAGRAM

Part	Description	Qty
1	Cylinder Head	1
2	Cover	1
3	Gasket	1
4	Tubing	1
5	Spark Plug	1
6	Gasket	1

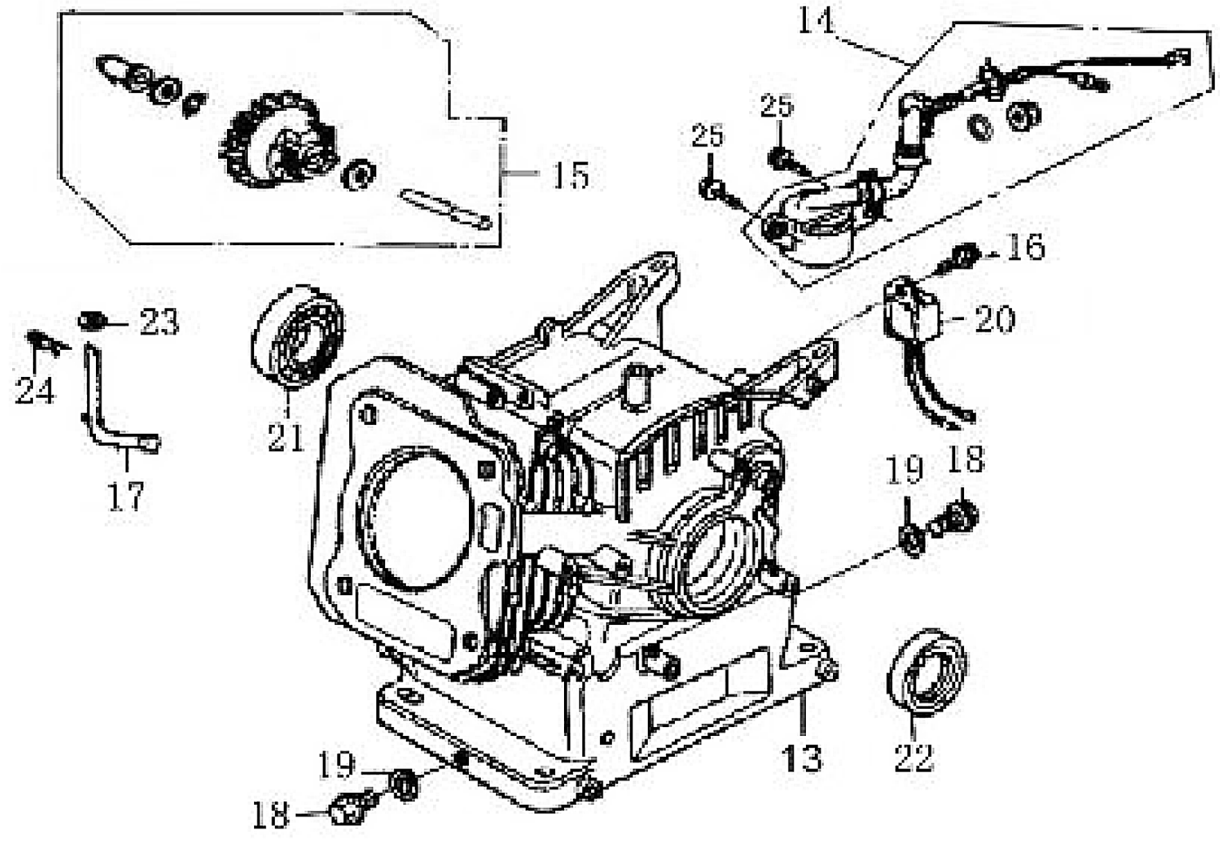
Part	Description	Qty
7	Gasket	1
8	Pin	1
9	Flange Bolt M6 x 14	4
10	Flange Bolt M8 x 55	4
11	Stud	2
12	Stud	2



CRANKCASE PARTS LIST & ASSEMBLY DIAGRAM

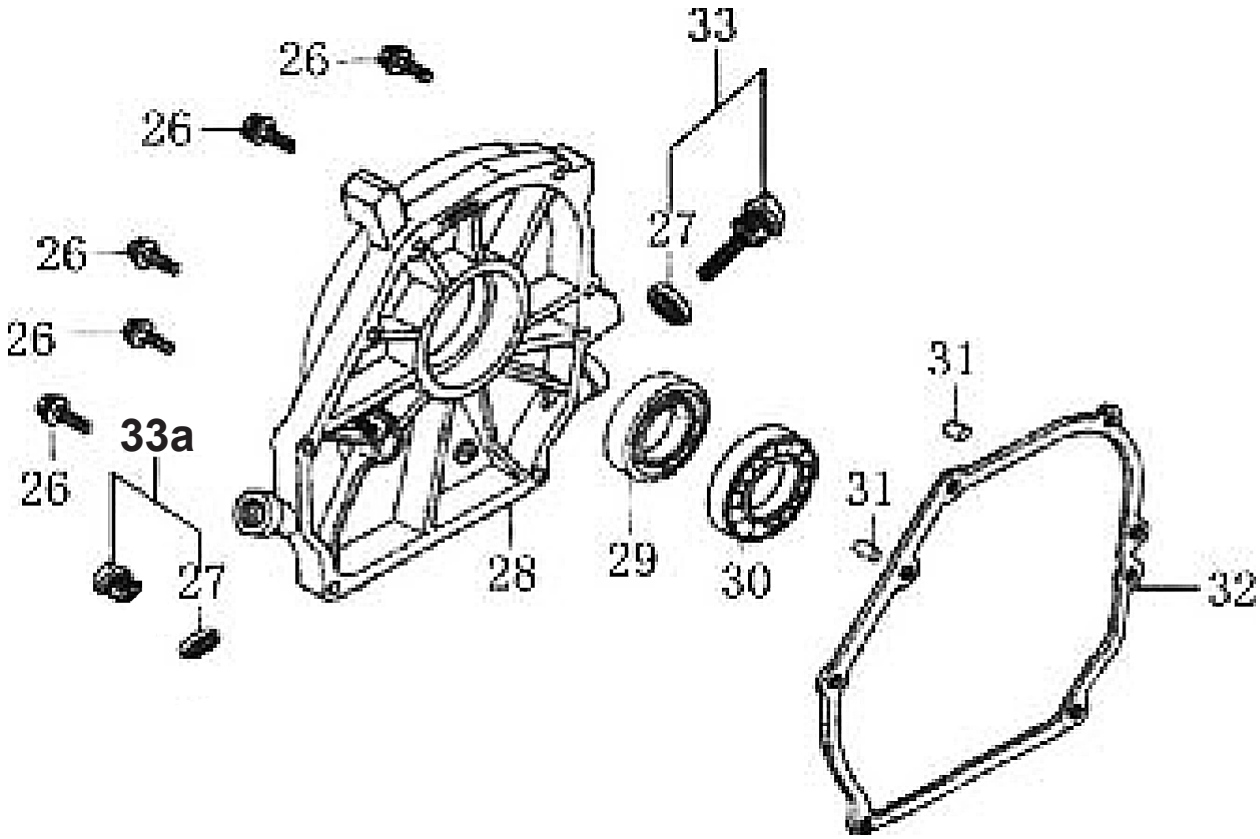
Part	Description	Qty
13	Crankcase	1
14	Oil Level Switch	1
15	Governor Assembly	1
16	Flange Bolt M6 x 10	1
17	Governor Arm Shaft	1
18	Bolt	2
19	Gasket	2

Part	Description	Qty
20	Oil Alert Unit	1
21	Bearing	1
22	Oil Seal	1
23	Washer M6 x 13 x 1	1
24	Lock Pin	1
25	Flange Bolt M6 x 14	2



CRANKCASE COVER PARTS LIST & ASSEMBLY DIAGRAM

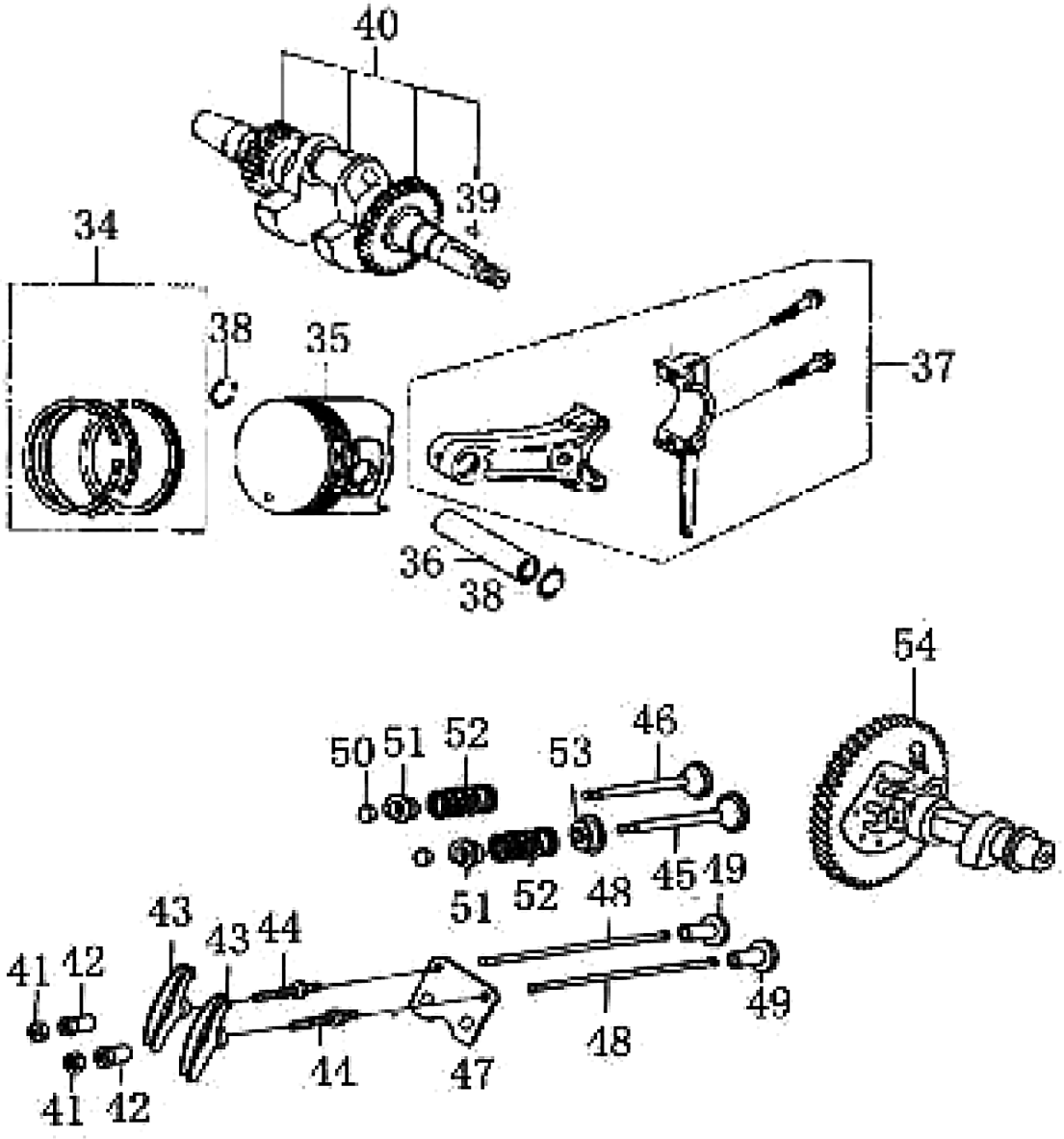
Part	Description	Qty
26	Flange Bolt	5
27	Oil Fill/Dipstick Gasket	2
28	Case Cover	1
29	Oil Seal	1
30	Bearing	1
31	Pin	2
32	Case Cover Packing	1
33	Dipstick	1
33a	Oil Fill Plug	1



CRANKSHAFT, PISTON & CAMSHAFT
PARTS LIST & ASSEMBLY DIAGRAM

Part	Description	Qty
34	Ring Set	1
35	Piston	1
36	Piston Pin	1
37	Connecting Rod Assembly	1
38	Piston Pin Retaining Ring	2
39	Key	1
40	Crankshaft	1
41	Pivot Adjusting Nut	2
42	Rocker Arm Pivot	2
43	Rocker Arm	2
44	Pivot Bolt	2

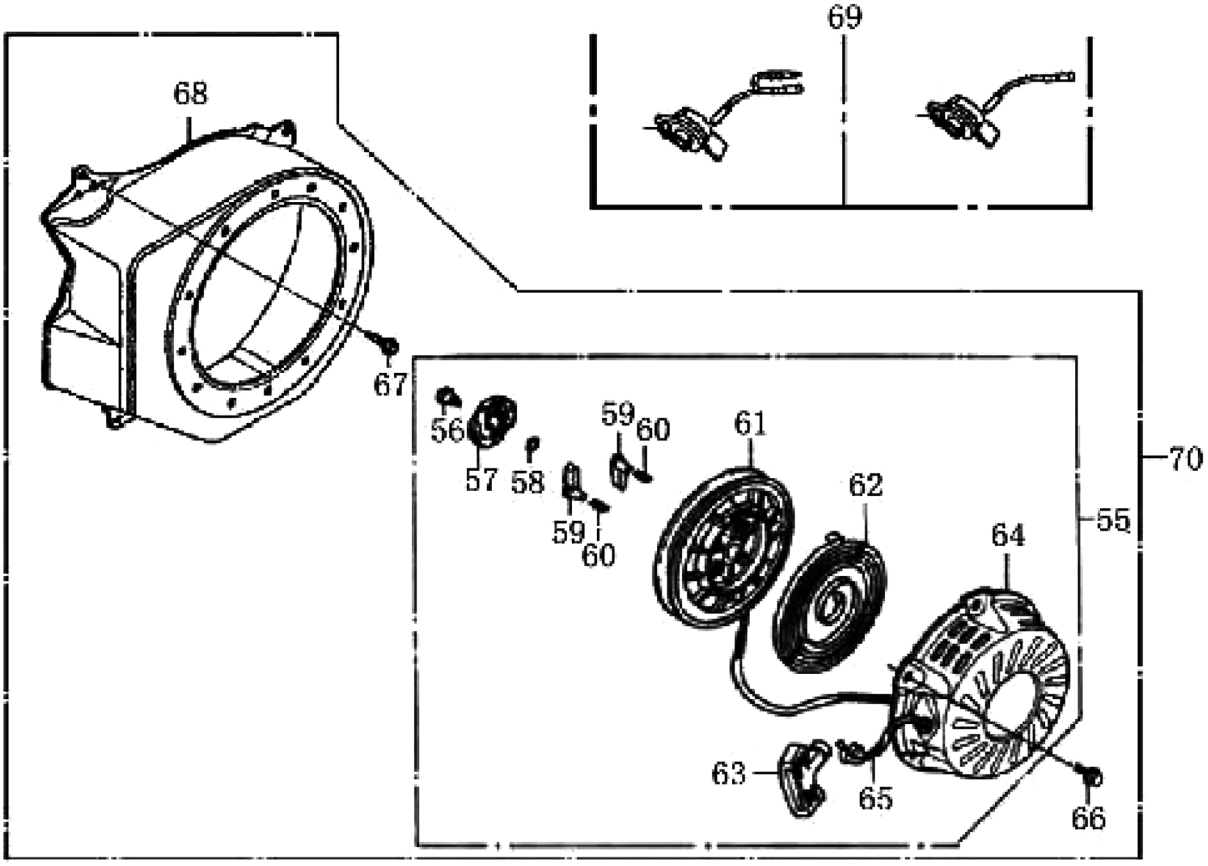
Part	Description	Qty
45	Intake Valve	1
46	Exhaust Valve	1
47	Push Rod Guide	1
48	Push Rod	2
49	Valve Lifter	2
50	Valve Rotator	2
51	Valve Spring Retainer	2
52	Valve Spring	2
53	Intake Valve Stem Seal	1
54	Camshaft Assembly	1



STARTER PARTS LIST & ASSEMBLY DIAGRAM

Part	Description	Qty
55	Recoil Starter Assembly	1
56	Set Screw	1
57	Ratchet Guide	1
58	Friction Spring	1
59	Starter Ratchet	2
60	Return Spring	2
61	Recoil Starter Reel	1
62	Recoil Starter Spring	1
63	Recoil Starter Knob	1
64	Fan Cover	1

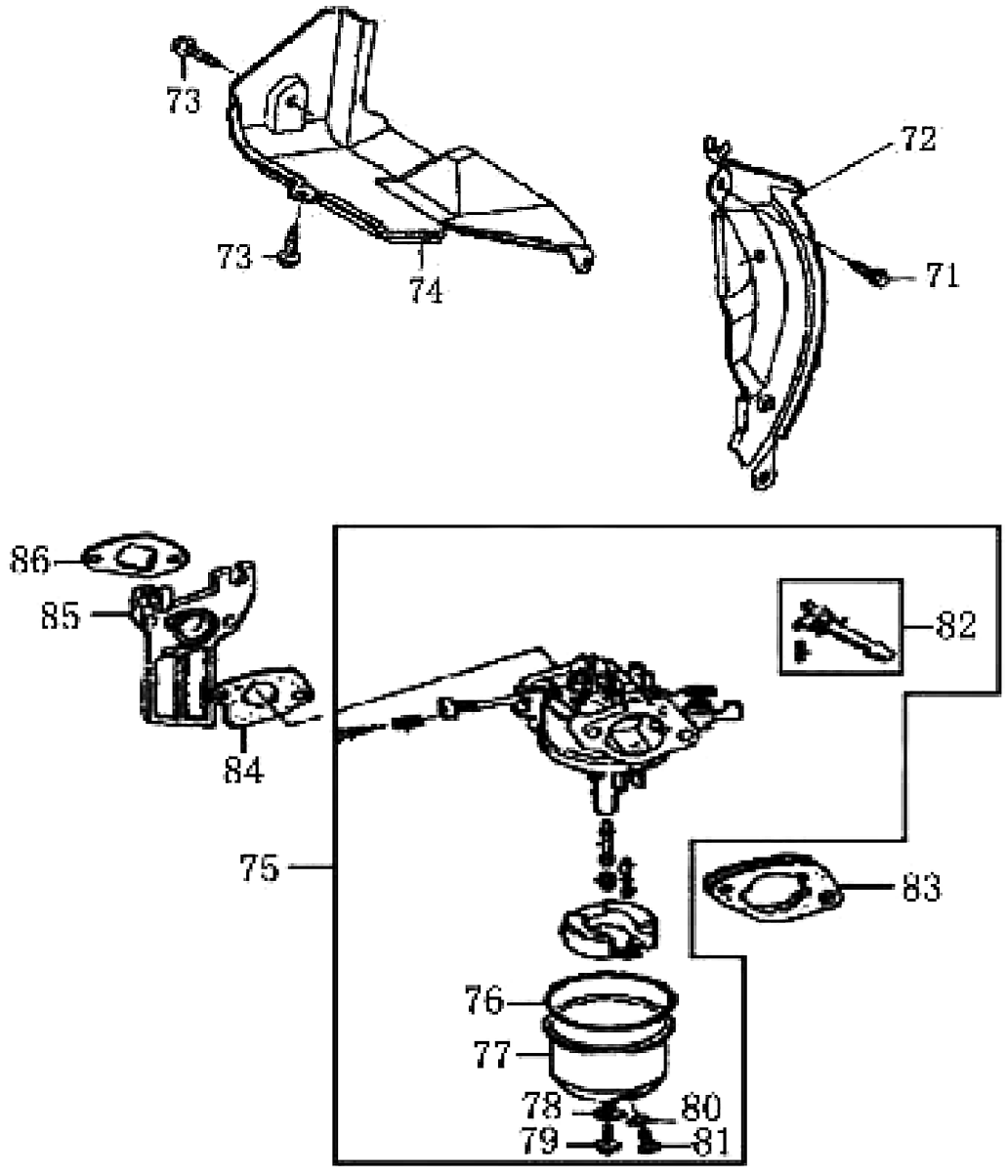
Part	Description	Qty
65	Rope	1
66	Flange Bolt M6 x 8	3
67	Flange Bolt M6 x 10	4
68	Fan Casing	1
69	Switch Assembly	1
70	Recoil Starter (Complete)	1



DIVERSION ASSEMBLY & CARBURETOR
PARTS LIST & ASSEMBLY DIAGRAM

Part	Description	Qty
71	Flange Bolt M6 x 20	1
72	Side Plate	1
73	Flange Bolt M6 x 8	2
74	Cover	1
75	Carburetor Assembly	1
76	Bolt	1
77	Oil Cup	1
78	Gasket	1

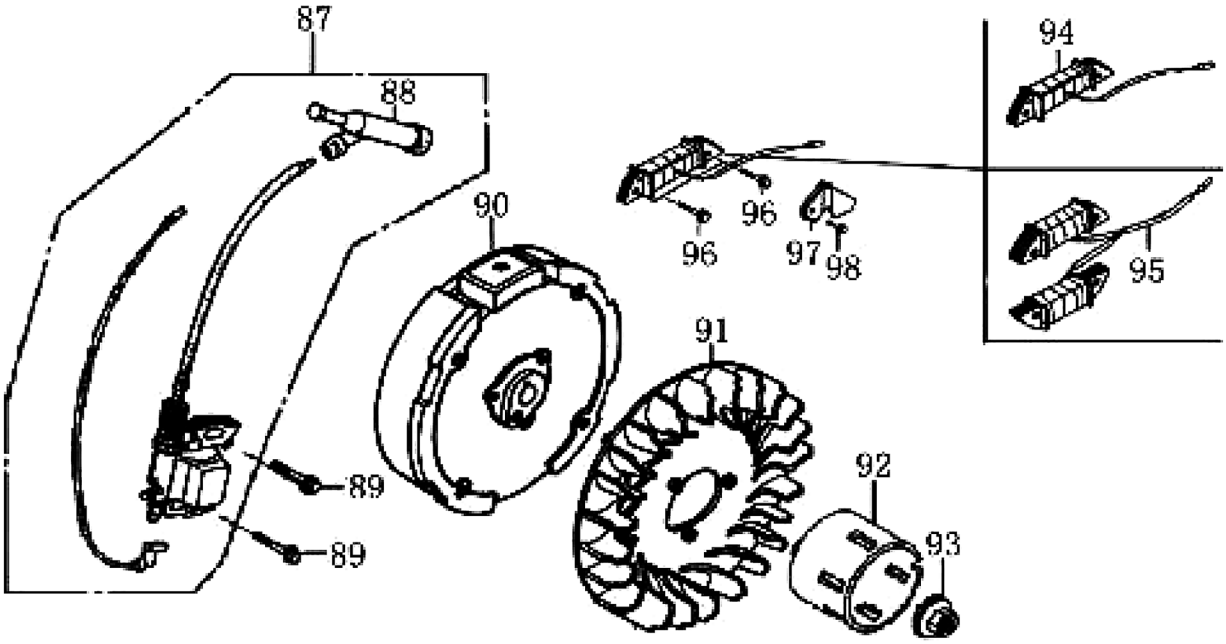
Part	Description	Qty
79	Bolt	1
80	Gasket	1
81	Oil Cup Drain Plug	1
82	Choke Lever	1
83	Padding	1
84	Padding	1
85	Insulator	1
86	Padding	1



FLYWHEEL & IGNITION PARTS LIST & ASSEMBLY DIAGRAM

Part	Description	Qty
87	Ignition Coil Assembly	1
88	Noise Suppressor Assembly	1
89	Flange Bolt M6 x 25	2
90	Flywheel	1
91	Cooling Fan	1
92	Starter Pulley	1

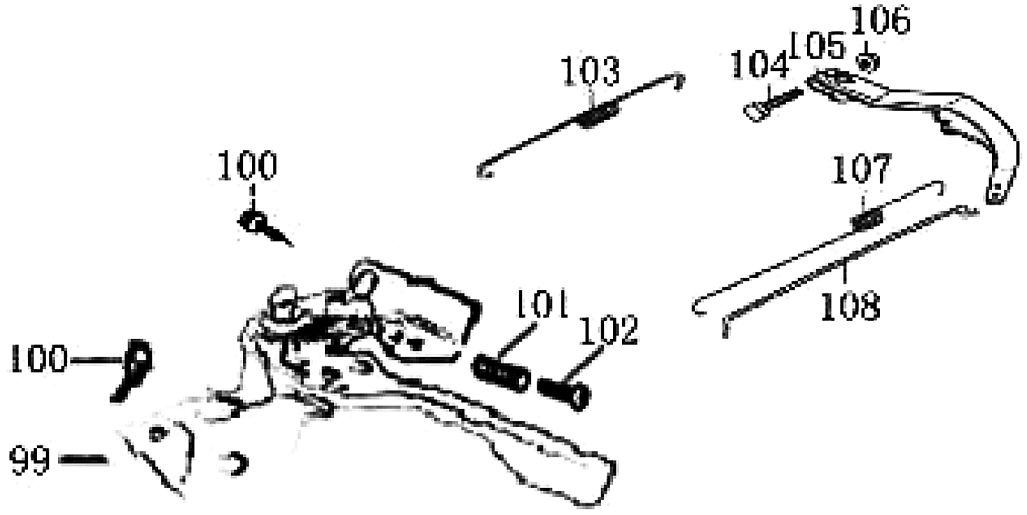
Part	Description	Qty
93	Nut	1
94	Charge Coil Assembly	1
95	Charge Coil Assembly	1
96	Flange Bolt	2
97	Cord Clamp	1
98	Flange Bolt M6 x 8	1

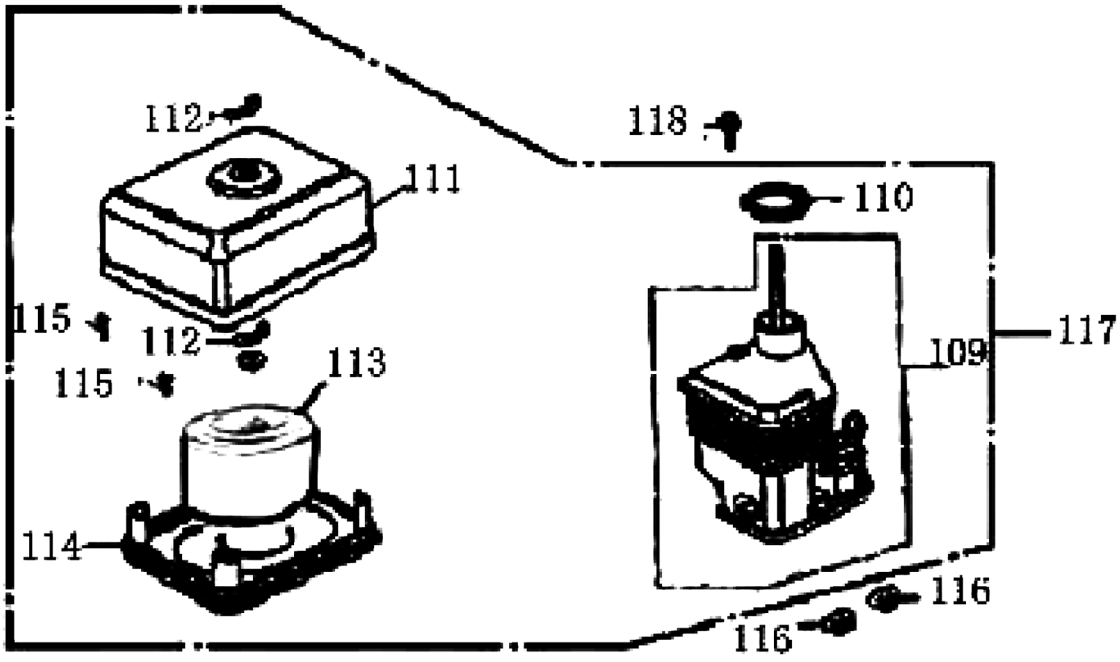


CONTROL SYSTEM & AIR CLEANER
PARTS LIST & ASSEMBLY DIAGRAM

Part	Description	Qty
99	Control Assembly	1
100	Flange Bolt M6 x 10	2
101	Spring	1
102	Screw M5 x 35	1
103	Governor Spring	1
104	Bolt	1
105	Governor Arm	1
106	Flange Nut	1
107	Spring	1
108	Governor Rod	1

Part	Description	Qty
109	Air Cleaner Elbow	1
110	Elbow Packing	1
111	Air Cleaner Cover	1
112	Nut	2
113	Air Cleaner Element Assembly	1
114	Silencer Nose	1
115	Screw	2
116	Flange Nut	2
117	Air Cleaner Assembly	1
118	Flange Bolt M6 x 20	1

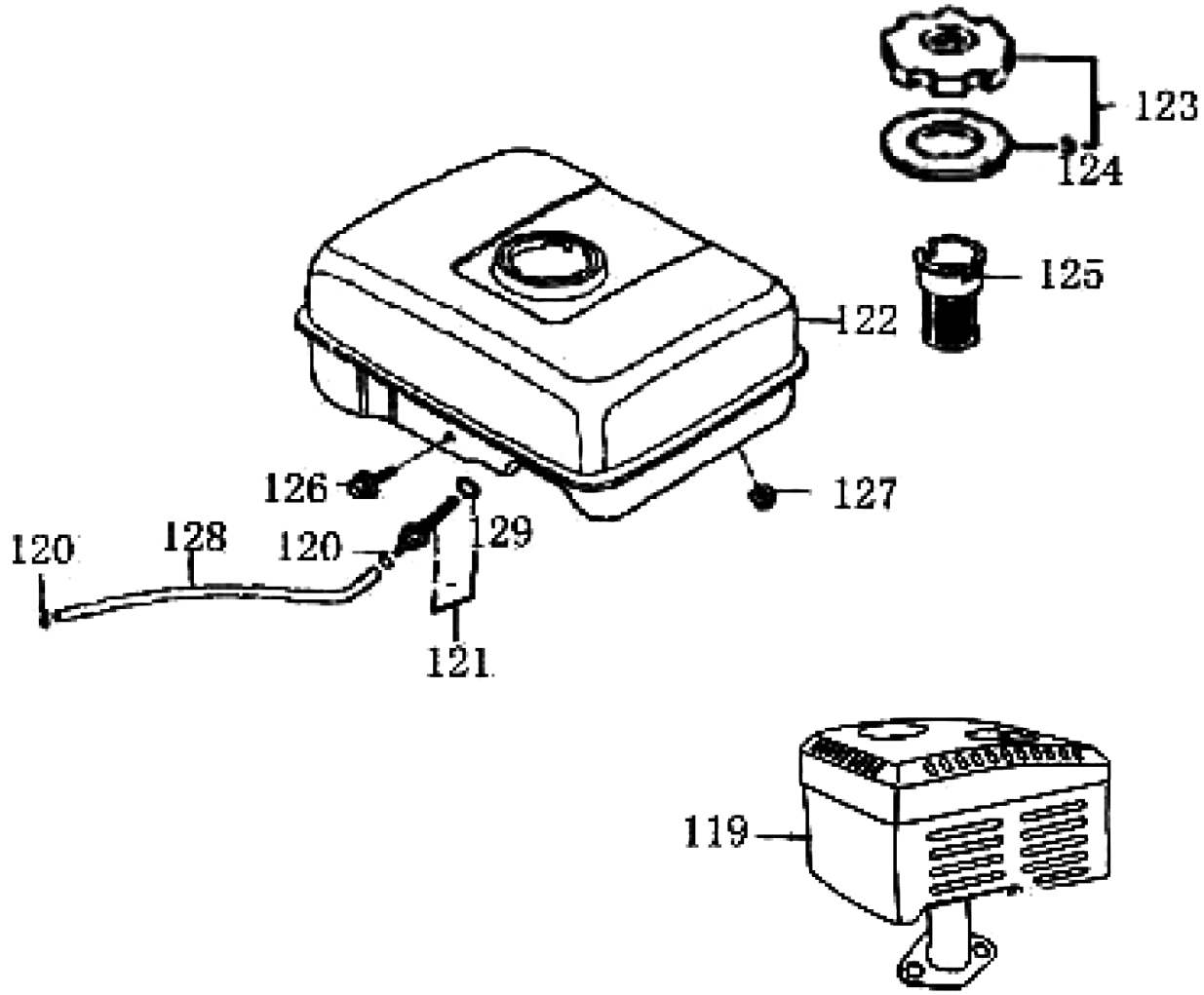




MUFFLER & FUEL TANK
PARTS LIST & ASSEMBLY DIAGRAM

Part	Description	Qty
119	Muffler Assembly	1
120	Tube Clip	2
121	Fuel Tank Joint Assembly	1
122	Fuel Tank	1
123	Fuel Cap	1
124	Gasket	1

Part	Description	Qty
125	Fuel Filter	1
126	Flange Bolt M6 x 25	1
127	Flange Nut M6	2
128	Fuel Hose	1
129	Seal Ring	1



LIMITED 1 YEAR / 90 DAY WARRANTY

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that for a period of ninety days from date of purchase that the engine/ motor, the belts (if so equipped), and the blades (if so equipped) are free of defects in materials and workmanship. Harbor Freight Tools also warrants to the original purchaser, for a period of one year from date of purchase, that all other parts and components of the product are free from defects in materials and workmanship (90 days if used by a professional contractor or if used as rental equipment). This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

3491 Mission Oaks Blvd. • PO Box 6009 • Camarillo, CA 93011 • (800) 444-3353

EMISSION CONTROL SYSTEM WARRANTY

United States Emission Control Defects Warranty Statement

The United States Environmental Protection Agency (herein EPA) and Harbor Freight Tools (herein HFT) are pleased to explain the emission control system warranty on your 1997 and later Small Off-Road Engine (herein engine). Within the United States, new off-road, spark-ignition engines certified for model year 1997 and later, must be designed, built and equipped to meet the stringent anti-smog standards set forth by the EPA. HFT must warrant the emission control system on your engine for the periods of time described below, provided there has been no abuse, neglect or improper maintenance of your engine.

Your emission control system may include parts such as the carburetor or fuel-injection system, and the ignition system. Also included may be hoses, belts, connectors and other emission-related assemblies.

Where a warrantable condition exists, HFT will repair your engine at no cost to you including diagnosis, parts and labor.

Manufacturer's Warranty Coverage

The 1997 and later engines are warranted for two (2) years. If any emission-related part on your engine is defective, the part will be repaired or replaced by HFT.

Harbor Freight Tools Emission Control Defects Warranty Coverage

Engines are warranted for a period of two (2) years relative to emission control parts defects, subject to the provisions set forth below. If any emission related part on your engine is defective, the part will be repaired or replaced by HFT.

Owner's Warranty Responsibilities

- As the engine owner, you are responsible for the performance of the required maintenance listed in your Owner's Manual. HFT recommends that you retain all receipts covering maintenance on your engine, but HFT cannot deny warranty solely for the lack of receipts or for your failure to ensure the performance of all scheduled maintenance.
- As the engine owner, you should, however, be aware that HFT may deny you warranty coverage if your engine or a part has failed due to abuse, neglect, improper maintenance, or unapproved modifications.
- You are responsible for shipping your engine to a HFT warranty station as soon as a problem exists. Contact the HFT Customer Service department at the number below to make shipping arrangements. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact the Harbor Freight Tools Customer Service Department at 1-800-444-3353.

Harbor Freight Tools Emission Control Defects Warranty Provisions

1. Length of Coverage

HFT warrants to a first retail purchaser and each subsequent purchaser that the engine is free from defects in materials and workmanship that cause the failure of warranted parts for a period of two (2) years after the date of delivery to the first retail purchaser.

2. No Charge Repair or Replacement

Repair or replacement of any warranted part will be performed at no charge to the owner if the work is performed through a warranty station authorized by HFT. For emissions warranty service, contact the HFT Customer Service Department at 1-800-444-3353.

3. Consequential Damages Coverage

Coverage under this warranty shall also extend to the failure of any engine components caused by the failure of any warranted part while it is still covered under this warranty.

4. Coverage Exclusions

Warranty claims shall be filed in accordance with the provisions of the HFT warranty policy explained in the box at the top of the previous page. HFT shall not be liable for any loss of use of the engine, for any alternative usage, for any damage to goods, loss of time, or inconvenience. Warranty coverage shall also be excluded for any part which fails, malfunctions, or is damaged due to failure to follow the maintenance and operating instructions set forth in the Owner's Manual including, but not limited to:

a) Use of parts which are not authorized by HFT

b) Improper installation, adjustment or repair of the engine or of any warranted part unless performed by an authorized warranty center

c) Failure to follow recommendations on fuel use contained in the Owner's Manual

d) Improper or inadequate maintenance of any warranted parts

e) Repairs performed outside of the authorized warranty service dealers

f) Alterations by changing, adding to or removing parts from the engine.

5. Service and Maintenance

Component parts which are not scheduled for replacement as required maintenance or are scheduled only for regular inspection to the effect of "repair or replace as necessary" are warranted for the warranty period. Any warranted part which is scheduled for replacement as required maintenance is warranted for the period of time up to the first scheduled replacement point for that part. Any replacement part, provided it is equivalent in durability and performance, may be used in performance of maintenance or repairs. The owner is responsible for commissioning a qualified technician/mechanic to perform all required maintenance, as outlined in the Inspection, Cleaning, and Maintenance section in this manual.

6. Warranted Parts

1) Fuel Metering System

i) Carburetor and its internal parts.

ii) Fuel pump (if so equipped).

iii) Cold start enrichment system.

2) Air Induction System

i) Intake pipe/manifold.

ii) Air cleaner.

3) Ignition System

i) Spark plug.

ii) Magneto ignition system.

4) Catalyst System (if so equipped)

i) Exhaust pipe stud.

ii) Muffler.

iii) Catalytic converter (if so equipped).

5) Miscellaneous Items Used in Above Systems

i) Vacuum, temperature and time sensitive valves and switches.

ii) Hoses, belts, connectors, and assemblies.